



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/028,080

12/21/2001

Slim S. Souissi

270/052

1071

27433

7590

07/10/2006

FOLEY & LARDNER LLP  
321 NORTH CLARK STREET  
SUITE 2800  
CHICAGO, IL 60610-4764

EXAMINER

PATHAK, SUDHANSHU C

ART UNIT

PAPER NUMBER

2611

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/028,080

Applicant(s)

SOUISSI ET AL

Examiner

Sudhanshu C. Pathak

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on May 10<sup>th</sup>, 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 32,35,37-42,44-47,49 and 51-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 32,35,37-42,44-47,49 and 51-55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on December 21<sup>st</sup>, 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 32, 35, 37-42, 44-47, 49 & 51-55 are pending in the application.

#### ***Response to Arguments***

2. Applicant's arguments with respect to claims 32, 35, 37-42, 44-47, 49 & 51-55 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 32, 35, 37-38, 40-41 (device) & 42, 44-47, 49, 51-52, 54-55 (system) are rejected under 35 U.S.C. 103(a) as being unpatentable over Souissi (6,785,556) in view of Loh et al. (6,282,086) in further view of Lieu et al. (6,708,045).

Regarding to Claims 32, 35, 37-38, 40-42, 44-45, 49, 51-52 & 54-55, Souissi discloses a multimode modem (Abstract, lines 1-6 & Fig. 3, elements 320-340 & Fig. 6, elements 620-650 & Fig. 9-10) comprising a first device configured to communicate with a first communication system (Abstract, lines 1-6 & Fig. 3, elements 320-340 & Fig. 6, elements 620-650 & Column 1, lines 64-67 & Column 2, lines 1-5 & Fig. 9-10); a second device configured to communicate with a second communication system (Abstract, lines 1-6 & Fig. 3, elements 320-340 & Fig. 6, elements 620-650 & Column 1, lines 64-67 & Column 2, lines 1-5 & Fig. 9-10); a processor communicatively coupled with at least one of the first and second devices

(Abstract, lines 1-3 & Fig. 1, elements 113, 120, 121 & Fig. 2a, elements 210, 285 & Fig. 11 & Column 1, lines 18-25, 58-65 & Column 2, lines 37-57 & Column 4, lines 25-35). Souissi also discloses a host device comprising a processor (Fig. 1, element 121 & Fig. 2, element 215). Souissi also discloses a communication interface between the first and second device wherein the interface allows the control function to enable the second device (Fig. 1, element 125 & Fig. 2a, elements 205, 285, 215 & Fig. 3, elements 320-340 & Fig. 6 & Column 4, lines 50-60 & Column 5, lines 50-60 & Column 6, lines 3-24). Souissi also discloses implementing the control function on an interface chip (Column 1, lines 57-67 & Fig. 3, element 315). Souissi further discloses typically interfaces between wireless devices and other computing systems (host) include a universal serial bus interface (USB) and a compact flash card (Column 1, lines 58-65). However, Souissi does not disclose the modem implemented in a modem card comprising a standard form factor and a secondary modem card comprising a smaller form factor.

Loh discloses a card device receptacles arrangement of a first receptacle and a second receptacle for separately receiving a card device in a portable computer (Abstract, lines 1-9 & Fig. 1 & Fig. 4-5 & Fig. 11-12 & Column 2, lines 5-18). Loh also discloses the receptacle for receiving the second card is small than the receptacle for the first card (Column 2, lines 21-42). Loh also discloses the card receptacle conforms to the PCMCIA format (Column 3, lines 30-45). Loh also discloses the secondary card may provide auxiliary or additional features to the computer as provided by the primary card (Column 3, lines 65-67 & Column 4, lines

1-5). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Loh teaches a card device receptacle that includes the ability to add an additional secondary card and the modem as described in Souissi can be implemented in the card/receptacle so as to increase the functionality of the computer while maintaining the standard form factor of the device and without increasing the size of the computer or user device. However, Souissi in view of Loh does not disclose the interface device configured to receive address and data information from host device and convert it into serial data to be communicated.

Lieu discloses an apparatus and method (modem) for multi mode communication (Column 1, lines 27-50 & Column 6, lines 1-52). Lieu also discloses an interface device configured to receive address and data information and converting the data into serial data to be communicated (Fig. 2, elements 202-212 & Fig. 6, elements 603-613 & Fig. 7, element 503, 506 & Column 2, lines 25-30, 55-60 & Column 3, lines 31-37 & Column 4, lines 55-60 & Column 6, lines 1-52 & Column 9, lines 35-50). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Lieu teaches implementing an interface device configured to receive address and data information and converting the data into serial data to be communicated and this is implemented in the modem as described in Souissi in view of Loh so as to provide a reconfigurable modem for communicating with various different devices.

In regards to Claims 46-47, Souissi in view of Loh in further view of Lieu discloses a multi-mode modem comprising a standard form factor and configured to

interface with a host device, the modem card including a primary modem card configured to communicate with a first communication system; an interface configured to receive a secondary modem card comprising a smaller form factor than a primary modem card, the secondary modem device configured to communicate with a second communication system; an interface device configured to interface the primary and secondary modem cards with a host processor wherein the interface device comprise: a host device interface; a primary device interface; and a secondary device interface wherein the primary device interface is a universal serial bus interface as described above. Souissi also discloses scanning a predetermined plurality of modem modes of operation to determine one or more modes of operation that satisfy a predetermined criterion (Column 3, lines 3-15 & Column 6, lines 3-24 & Fig. 4, elements 420). Souissi also discloses scanning if the communication with the specified communication system is not available (Fig. 7, elements 720). Souissi also discloses scanning for another communication system coverage for a predetermined time period (Fig. 5, elements 560, 570 & Column 6, lines 36-46). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Souissi in view of Loh in further view of Lieu satisfies the limitations of the claims.

5. Claims 39 (device) & 53 (system) are rejected under 35 U.S.C. 103(a) as being unpatentable over Souissi (6,785,556) in view of Loh et al. (6,282,086) in further view of Lieu et al. (6,708,045) in further view of Garudadri et al. (US 2002/0077814).

In regards to Claims 39 & 53, Souissi in view of Loh in further view of Lieu discloses a multi-mode modem comprising a standard form factor and configured to interface with a host device, the modem card including a primary modem card configured to communicate with a first communication system; an interface configured to receive a secondary modem card comprising a smaller form factor than a primary modem card, the secondary modem device configured to communicate with a second communication system; an interface device configured to interface the primary and secondary modem cards with a host processor wherein the interface device comprise: a host device interface; a primary device interface; and a secondary device interface wherein the primary device interface is a universal serial bus interface as described above. Souissi further discloses the interface device for communicating the voice data (Column 2, lines 1-5). However, Souissi in view of Loh in further view of Lieu does not disclose the primary device interface includes a pulse code modulation interface for voice data.

Garudadri discloses that voice data is pulse code modulated (PCM) format wherein the microphone converts audible input voice information into voice data in a PCM format (Specification, Page 1, Paragraph 4, lines 6-13). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Garudadri teaches implementing a PCM format for communications of voice data and this is implemented in the modem as described in Souissi in view of Loh in further view of Lieu as an interface for communication of voice form the modem, thus satisfying the limitation of the claims.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, it is recommended to the applicant to amend all the claims so as to be patentable over the cited prior art of record. A detailed list of pertinent references is included with this Office Action (See Attached "Notice of References Cited" (PTO-892)).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhanshu C. Pathak whose telephone number is (571)-272-3038. The examiner can normally be reached on M-F: 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571)-272-3042.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2611

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sudhanshu C. Pathak  
Examiner  
Art Unit 2611

  
**CHIEH M. FAN**  
SUPERVISORY PATENT EXAMINER